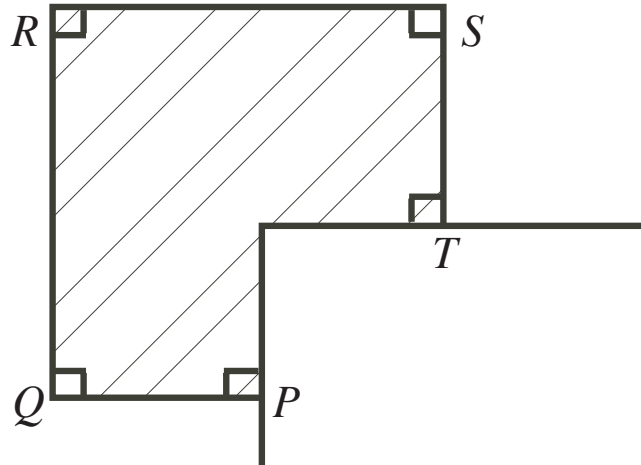




## Problem of the Week Grade 11 and 12

### Playing With a Full Deck



The diagram shows the plan for a deck which is to be built on the corner of a cottage. A railing is to be constructed around the four outer edges of the deck from  $P$  to  $Q$  to  $R$  to  $S$  to  $T$ . The length of the rail from  $P$  to  $Q$  is the same as the length of the rail from  $S$  to  $T$  and the length of the rail from  $Q$  to  $R$  is the same as the length of the rail from  $R$  to  $S$ . The total length of the railing is 30 m.

Determine the dimensions of the deck which will have the maximum area.

